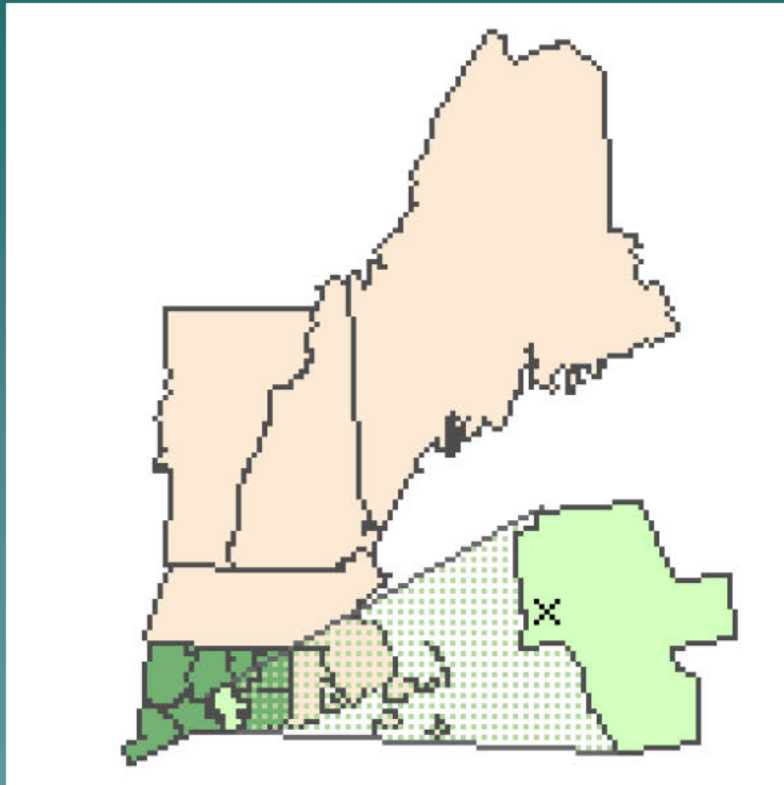


# Durham Meadows Superfund Site Durham, CT



Site-wide Groundwater Study  
Area (Water Line)

# Site Location



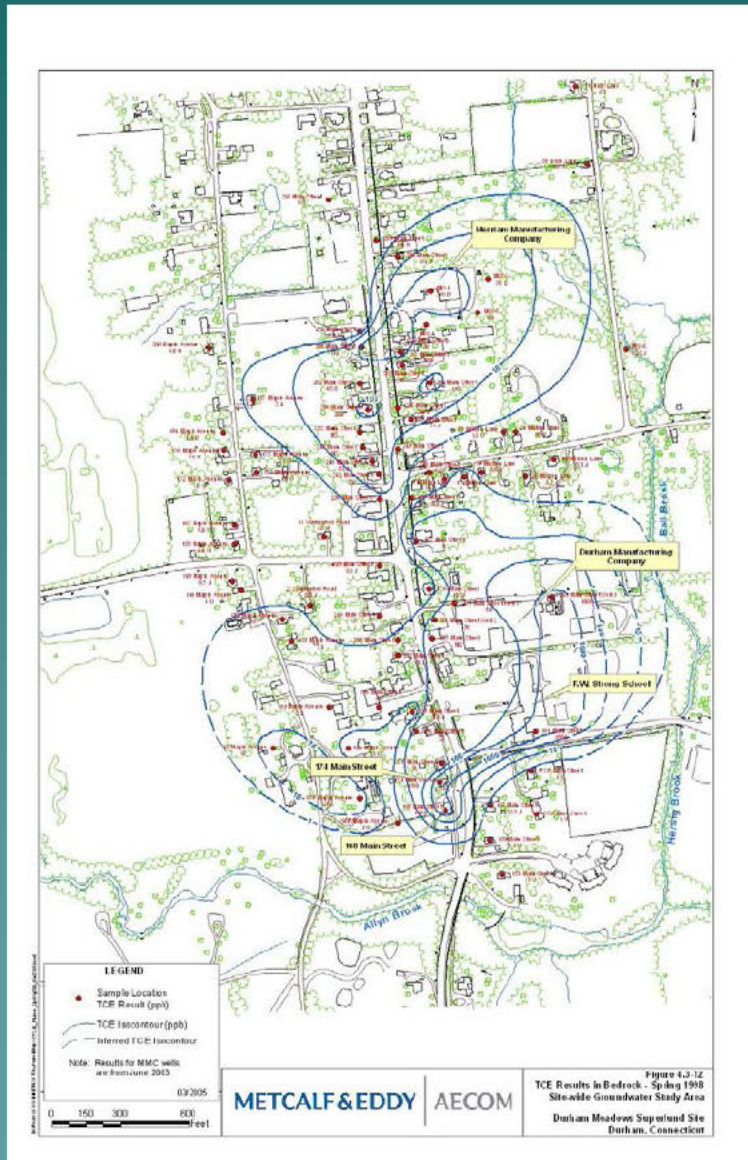
- ◆ Durham, CT is located 20 miles south of Hartford, site located on Main Street
- ◆ Two source areas: Merriam Manufacturing Co. (MMC), est. 1851, and Durham Manufacturing Co. (DMC), est. 1922
  - Both are metal box manufacturers, both stored process wastes in drums and disposed to lagoons/sludge beds
- ◆ Site-wide Groundwater Study Area, includes primarily residential homes, some industry & business



# ROD Cleanup Plan – Entire Site

- ◆ MMC Study Area: Excavation + off-site disposal (complete)
- ◆ DMC Study Area: Excavation + off-site disposal (Fund-lead, design ongoing)
- ◆ Connection to Middletown Water Distribution System for homes that are or could become impacted by GW contamination
- ◆ Technical Impracticability Waiver for groundwater cleanup
- ◆ Implementation of site-wide GW monitoring network after water line installed
- ◆ Investigate/address potential vapor intrusion in site-wide area (Fund-lead, investigations to resume this FY)
- ◆ Institutional controls to prevent unrestricted future use (working with CT DEEP and Town on zoning ordinance)


# Overall Area of GW Contamination



- ◆ VOC contamination at both sources, groundwater plume migrates from both (primarily TCE, plus other chlorinated solvents)
- ◆ 1980 - State issues orders to MMC & DMC to monitor/filter contaminated residential wells
- ◆ 2005 - State takes over monitoring/filtration at locations impacted by MMC
- ◆ 2013 - EPA CD with DMC includes requirement to continue monitoring/filtration at DMC-impacted locations



# Overall Area of GW Contamination (continued)

- ◆ 50 wells, serving 54 locations (mostly residential homes), have contamination and are on filters
  - ◆ Of the 50 wells, 10 locations also receiving bottled water for drinking water use due to 1,4-dioxane contamination
  - ◆ Two locations (one residential/one commercial) have air bubbler/stripper pre-treatment due to especially high VOC levels
  - ◆ 17 additional locations are regularly monitored, no filter yet
- 
- A decorative graphic in the bottom right corner of the slide, consisting of a stylized silhouette of a mountain range in a teal color.

## Max groundwater concentrations (ppb) of select contaminants

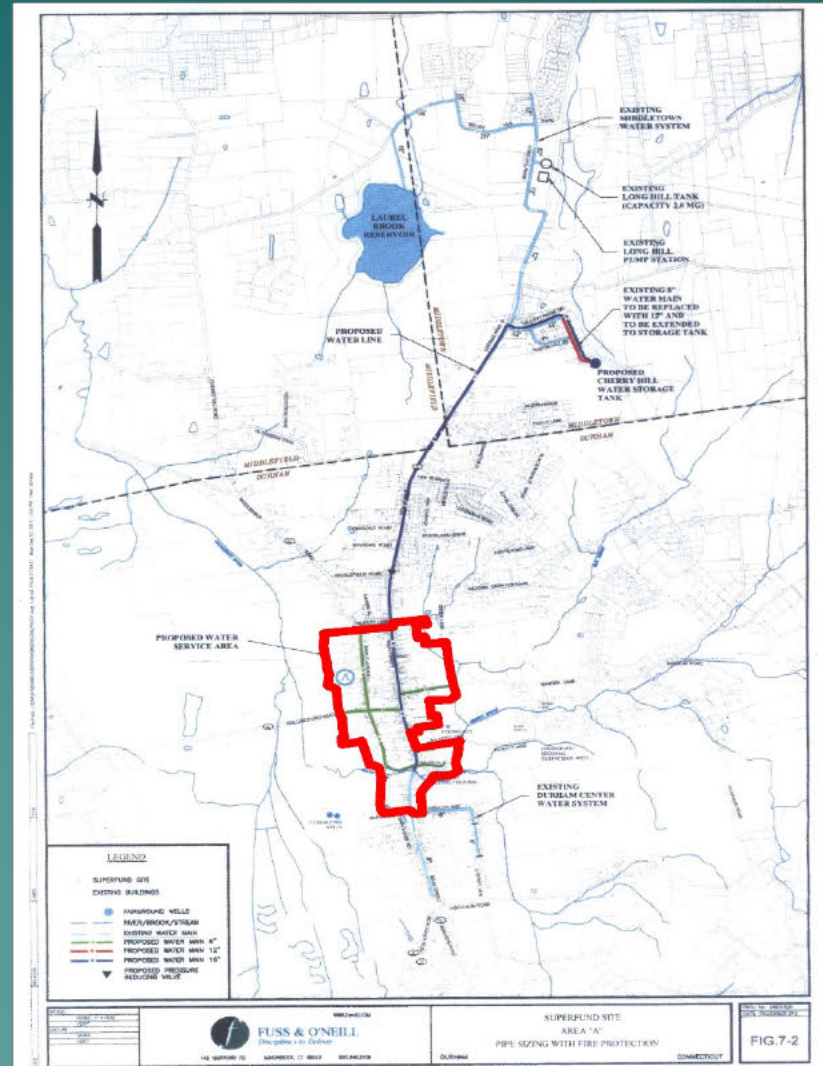
Current cancer risk ranges from  $2 \times 10^{-4}$  to  $3 \times 10^{-2}$ .

Target organ HIs range from 2 to 900.

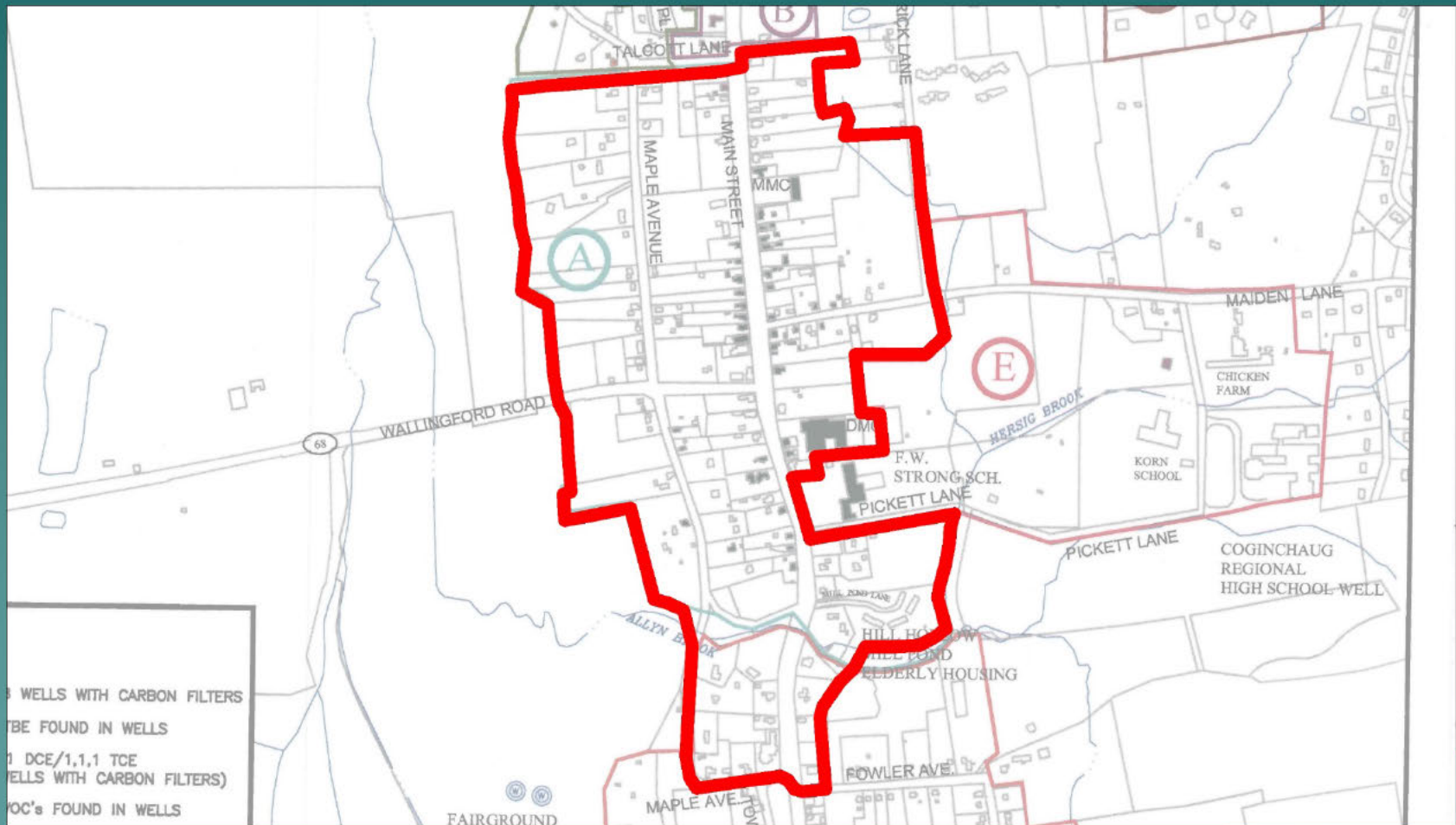
Future risks are  $4 \times 10^{-2}$  and HI of 900.

TCE	2500
PCE	210
Vinyl Chloride	18
1,2-Dichloroethene	740
Cis-1,2-Dichloroethene	640
1,4-Dioxane	58

# Area A – Superfund site



# Area A – close up of service area





# Major water line components

- ◆ Concrete water storage tank (in Middletown) and access road
- ◆ Pump station electrical improvements
- ◆ Water main (sized to allow future flow)
- ◆ Connection to all locations within Superfund area (including curb boxes to vacant lots)
- ◆ Curb box to property line at all parcels along water line route outside of Superfund area
- ◆ Stub lines at future street connection points to areas outside of Superfund area
- ◆ Abandonment of all private wells
- ◆ Connection of water main to Town of Durham water system

# Water line construction

- ◆ Expected to take two field seasons
- ◆ Cost estimate: \$20 million
- ◆ City of Middletown and/or Town of Durham will provide all O&M
- ◆ State/Town intend to conduct RD for connection to other pollution-related areas + schools once Superfund area water line is complete